



AMENDMENTS TO THE CLAIMS

Claims 1-14 (previously cancelled)

Claim 15 (Currently amended): A system for determining a quantity of fuel in a container, said system comprising:

at least one sensor disposed at said container for sensing a quantity of fuel in the container;

sensor excitation system coupled to each of said at least one sensor through an electrical pathway for providing an excitation signal thereto;

transient suppression apparatus disposed in series with each said electrical pathway for limiting current, voltage and energy to the container, said apparatus comprising:

an impedance element coupled in series with said electrical pathway to conduct current to the sensor to which it is coupled, said current causing a voltage potential across said impedance element;

at least one first [~~semiconductor element~~] field effect transistor coupled to said impedance element in series with said current path upstream of said impedance element, each said at least one first [~~semiconductor element~~] field effect transistor having a source and gate connected respectively to an upstream side and a downstream side of said impedance element, and controlled directly by the voltage potential across said impedance element [operative] to impose a series resistance to said current of said electrical pathway [~~governed by~~] proportional to the voltage potential of a first polarity across said impedance element; and

at least one second [~~semiconductor element~~] field effect transistor coupled to said impedance element in series with said current path downstream of said impedance element, each said at least one second [~~semiconductor element~~] field effect transistor having a source and gate connected respectively to the downstream side and the upstream side of said impedance element, and controlled directly by the voltage potential across said impedance element [operative] to impose a series resistance to said current of said electrical pathway [~~governed by~~] proportional to the voltage potential of a second polarity across said impedance element.

Claim 16 (Original): The system of claim 15 being disposed on an aircraft; and wherein the container comprises an aircraft fuel tank and the fuel comprises aircraft fuel.

Claim 17 (Original): The system of claim 15 wherein the sensor excitation system is operative to generate an excitation signal of the group of signals comprising AC, DC and pulsed excitation signals to excite a sensor at the container; and wherein each transient suppression apparatus is adaptable to accommodate any excitation signal of said group.

Claim 18 (Original): The system of claim 15 wherein the transient suppression apparatus is operative to limit the current, voltage and energy to the container caused by threats to the system to within levels considered safe.

Claim 19 (Original): The system of claim 15 wherein the transient suppression apparatus is operative to limit the current, voltage and energy to the container caused by failures of the system to within levels considered safe.

Claim 20 (Original): The system of claim 15 wherein the transient suppression apparatus is disposed in series with each electrical pathway in close proximity to the container.